What is claimed is:

1. An electroconductive ink comprising:

substantially cylindrical carbon fibrils having one or more graphitic layers concentric with their cylindrical axes, said carbon fibrils being substantially free of pyrolytically deposited carbon overcoat, having a substantially uniform diameter between 0.4 nm and 100 nm and having a length to diameter ratio greater than 5; and

a liquid vehicle;

wherein said electroconductive ink has a viscosity ranging from 1 to 50,000 cps.

2. The electroconductive ink of claim 1, further comprising a polymeric binder.

3. The electroconductive ink of claim 1 or 2, wherein the fibrils are oxidized.

4. The electroconductive ink of claim 2, wherein said polymeric binder is selected from the group consisting of VAGH, VAGF, XP-9901, cellulose acetate butyrate, hydroxylethyl cellulose, carboxylmethyl cellulose, and acrylic-based polymers.

5. The electroconductive ink of claim 1, 2, 3 or 4, wherein said liquid vehicle is a nonhydrocarbon polar organic solvent.

6. The electroconductive ink of claim 1, 2, 3 or 4, wherein said liquid vehicle is selected from the group consisting of carbitol, carbitol acetate, butyl carbitol, butyl carbitol acetate, butyrolactone, acetone, methyl ethyl ketone, cyclohexanone, dibasic ester solvent, diglyme, high boiling alcohols and alcohol esters.

7. The electroconductive ink of claim 5, wherein said organic solvent has a boiling point from about 150°C to 200°C.

8. The electroconductive ink of claim 1, 2, or 3, wherein said liquid vehicle is water.

9. The electroconductive ink of any one of claims 1-8, wherein the carbon fibrils are present in the range of from about 1 to about 5 percent by weight of the electroconductive ink.

10. The electroconductive ink of any one of claims 1-8, wherein said carbon fibrils are present in the range of from about 1.5 to about 2.5 percent by weight of the electroconductive ink.

11. The electroconductive ink of claim 2, wherein said polymeric binder is present in the range of from about 0.5 to about 10 percent by weight of the electroconductive ink.

12. The electroconductive ink of claim 2, wherein said polymeric binder is present in the range of from about 3 to about 6 percent by weight of the electroconductive ink.

13. The electroconductive ink of claim 1, wherein the carbon fibrils are 3.5 to 70 nm in diameter.

14. The electroconductive ink of claim 1, wherein the carbon fibrils have a fishbone morphology.

15. The electroconductive ink of claim 1, further comprising a surfactant.

16. The electroconductive ink of claim 1, wherein said carbon fibrils are in the form of aggregates.

17. The electroconductive ink of claim 16, wherein said aggregates are selected from the group consisting of combed yarn aggregates, cotton candy aggregates, bird nest aggregates, open net aggregates, single wall ropes and mixtures thereof.

18. The electroconductive ink of claim 1, wherein said carbon fibrils are oxidized multiwall carbon fibrils.

19. The electroconductive ink of claim 1, further comprising a carbon material selected from the group consisting of carbon black, graphite or mixtures thereof.

20. The electroconductive ink of claim 1, wherein the electroconductive ink has a degree of thixotropy ranging from 1.0 to 1.5.

21. A method for making an electroconductive ink comprising the steps of:

adding carbon fibrils to a liquid vehicle to form a solution, said carbon fibrils being substantially cylindrical, having one or more graphitic layers concentric with their cylindrical axes, being substantially free of pyrolytically deposited carbon, having a substantially uniform diameter between 0.4 nm and 100 nm and having a length to diameter ratio greater than 5;

dispersing said carbon fibrils in said solution;

milling said carbon fibrils in said solution; and

filtering said solution to form said electroconductive ink.

22. The method of claim 21, further comprising the step of mixing a polymeric binder with the liquid vehicle before adding said carbon fibrils.

23. The method of claim 21, wherein said dispersing step is performed by sonication.

24. The method of claim 21, wherein said milling step is performed by a three roll mill.

25. The method of claim 21 wherein said filtering step is performed with a screen.

26. The method of claim 21, wherein said polymeric binder is selected from the group consisting of VAGH, VAGF, cellulose acetate butyrate, and acrylic-based polymers.

27. The method of claim 21, wherein said liquid vehicle is a nonhydrocarbon polar organic solvent.

28. The method of claim 21, wherein said liquid vehicle is selected from the group consisting of carbitol, carbitol acetate, butyl carbitol, butyl carbitol acetate, butyrolactone,

acetone, methyl ethyl ketone, cyclohexanone, dibasic ester solvent, diglyme, high boiling alcohols, alcohol esters, and water.

29. The method of claim 21, wherein the liquid vehicle is water.

30. The method of claim 21, wherein said liquid vehicle has a boiling point from about 150°C to 200°C.

31. The method of claim 21, wherein the carbon fibrils are 3.5 to 70 nm in diameter with c-axes substantially perpendicular to the fibril axis.

32. The method of claim 21, wherein the carbon fibrils have a fishbone morphology.

33. The method of claim 21, wherein said carbon fibrils are in the form of aggregates.

34. The method of claim 33, where said aggregates are selected from the group consisting of combed yarn aggregates, cotton candy aggregates, bird nest aggregates, open net aggregates, single wall ropes and mixtures thereof,.

35. The method of claim 21, wherein said carbon fibrils are oxidized multiwall carbon fibrils.

36. An electroconductive coating comprising:

substantially cylindrical carbon fibrils having one or more graphitic layers concentric with their cylindrical axes, said carbon fibrils being substantially free of pyrolytically deposited carbon overcoat, having a substantially uniform diameter between 0.4nm and 100 nm and having a length to diameter ratio greater than 5,

wherein said coating has a conductivity resistivity of 0.001 to 0.25 ohm cm

37. The electroconductive coating of claim 36, further comprising a polymeric binder.

38. The electroconductive coating of claim 36, wherein the polymeric binder is selected from the group consisting of VAGH, VAGF, XP-9901, cellulose acetate butyrate, and acrylic polymers.

39. The electroconductive coating of claim 36, wherein said carbon fibrils are in the form of aggregates.

40. The electroconductive coating of claim 39, where said aggregates are selected from the group consisting of combed yarn aggregates, cotton candy aggregates, bird nest aggregates, open net aggregates, single wall ropes and mixtures thereof.

41. The electroconductive coating of claim 36, wherein said carbon fibrils are oxidized multiwall carbon fibrils.

42. The electroconductive coating of claim 36, wherein said coating has a thickness of 0.1 to 0.5 mil.

43. An electroconductive coating made using the conductive ink of any one of claims 1-20.

44. An electroconductive coating made using a conductive ink made according to the method of any one of claims 21-35.

45. A method of preparing an electroconductive coating using the ink of any of claims 1-20 comprising screen printing said ink to form said coating.

46. A method according to claim 45, wherein the viscosity of the ink is between 1000 and 50,000cps.

47. A method of preparing an electroconductive coating using the ink of any one of claims 1-20 comprising ink jet printing said ink to form said coating.

48. A method according to claim 47, wherein the fibrils are oxidized.

49. A method according to claim 46, wherein the viscosity of the ink is between 1 and 3 cps.

50. A method of preparing an electroconductive coating using the ink of any one of claims 1-20 comprising spraying the ink through a mask to form said coating.

51. A method according to claim 50, wherein the viscosity of the ink is between 1 and 5 cps.

52. A field emission cathode comprising a coating made according to the method of any one of claims 36 to 51.

53. A field emission cathode operating at between 0.1 and 2.0 v/μm, having a patterned cathode with features smaller than 1 mm prepared using the inks according to any one of claims 1-20.

54. A cathode of claim 53, wherein the carbon fibrils are 3.5 to 70 nm in diameter with c-axes substantially perpendicular to the fibril axis.

55. A display device comprising the cathode of any one of claims 52 to 53.

56. A supercapacitor comprising one or more printed electrodes made according to the method of any one of claims 36 to 51.

57. A printed resistor comprising a coating made according to the method of any one of claims 36 to 51.